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**A NEW SPECIES OF LAELAPS FROM THE LEMMING MOUSE,  
SYNAPTOMYS COOPERI**

(ACARINA: LAELAPIDAE)

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ABSTRACT—*Laelaps stupkai*, n. sp. is described from the southern lemming mouse, *Synaptomys cooperi stonei* Rhoads, collected in the Great Smoky Mountains National Park, North Carolina.

*Laelaps* Koch is a genus of worldwide distribution, normally parasitizing myomorph rodents which inhabit moist situations. Recent collections of ectoparasites in the course of ecological studies on small mammals in the Great Smoky Mountains National Park have revealed the presence of a new species of *Laelaps*. The host for this mite was a southern lemming mouse, *Synaptomys cooperi stonei* Rhoads, taken near the southern limit of the geographical distribution of this genus. A search of the literature reveals few instances of the parasitism of *Synaptomys* by members of the genus *Laelaps*.

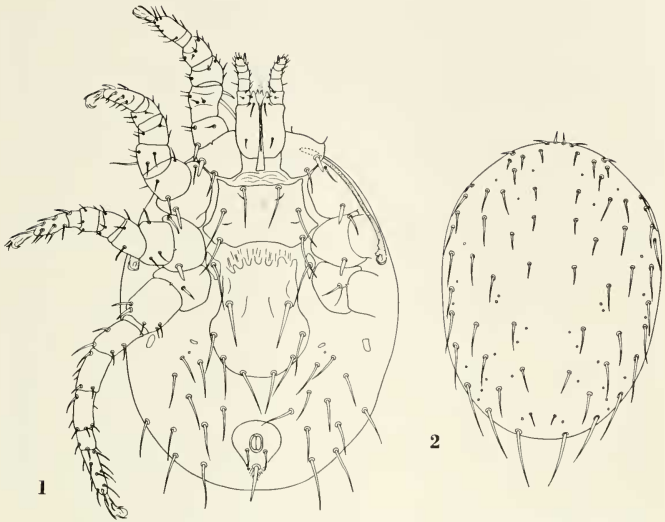
***Laelaps stupkai* Linzey and Crossley, n. sp.**  
(Figs. 1 and 2)

Description based upon female; male unknown.

*Diagnosis:* *Laelaps sensu* Tipton 1960. Distance between first pair of epigynial setae much greater than distance between fourth pair of epigynial setae; length of adanal setae greater than  $\frac{1}{3}$  width of anal plate; length of postanal seta less than length of anal plate; first pair of sternal setae not reaching posterior margin of sternal plate; proximal seta of coxa I setiform, distal seta of coxa I spiniform; peritreme extending to middle of coxa I.

*Idiosoma:* 770  $\mu$  long by 590  $\mu$  wide.

*Dorsum:* Dorsal plate elliptical, covering most of dorsum, with about 33 pairs



FIGS. 1 & 2. *Laelaps stupkai* n. sp.: 1, ventral aspect of female; 2, dorsal plate of female.

of setae. Penultimate setae of row D shortened, others of normal length. Distribution of pores as shown in fig. 2.

*Venter*: Sternal plate well sclerotized, finely punctate but without reticulations; maximum length  $145\mu$ , maximum width  $234\mu$ ; setae long, tapered, first pair reaching past bases of second pair but not to posterior margin; sternal pores distinct. Endopodal plates spindle-like, bearing setae resembling those of sternal plate, without pores. Epigynial plate well sclerotized;  $250\mu$  long by  $220\mu$  wide; setae tapered; distance between first pair of setae  $113\mu$ , distance between fourth pair of setae  $65\mu$ . Metapodal plates distinct. Anal plate  $128\mu$  long by  $104\mu$  wide; adanal setae weak,  $40\mu$  long, reaching to base of postanal seta; postanal seta strong,  $70\mu$  long. Soft integument of venter with 11 pairs of tapered setae. Peritreme reaching to middle of coxa I, peritremal plate not extending posteriorly.

*Legs*: Robust, shortened, with weak claws, leg IV the longest. Coxa I with setiform proximal seta, spiniform distal seta; coxa II with spiniform seta; coxa III with setiform anterior seta, spiniform posterior seta; coxa IV with setiform seta. Trochanter I with spiniform proximal seta. Femora I and II and genu I with elongate dorsal setae; other leg setae short.

*Type Material*: Holotype and two paratypes, all females, from a male *Synaptomys cooperi stonei* Rhoads. The host (DWL Mammal No. 265) was taken along U. S. Route 441 at Kanati Fork, a tributary

of the Oconaluftee River, Great Smoky Mountains National Park, Swain County, North Carolina, elevation 2800 ft, on December 16, 1965, by the senior author and his wife, Alicia V. Linzey.

The holotype has been deposited in the U. S. National Museum, type No. 34-80. Paratypes have been deposited in the acarology collections of the University of Georgia and in the collections of the senior author at the University of South Alabama.

*Remarks:* This species is named in honor of Mr. Arthur Stupka in recognition of his immeasurable contribution to the knowledge of the natural history of the Great Smoky Mountains National Park where he served as chief naturalist and biologist for almost 29 years.

In Tipton's (1960) revision of the genus *Laelaps*, *L. stupkai*, n. sp. will key out to *nuttalli* Hirst. It differs from *nuttalli* in having the fourth pair of setae on the epigynial plate much closer together than the first pair of setae. *Laelaps nuttalli* exhibits some variation in this feature, but specimens from the southeastern United States examined by Tipton had the fourth pair of setae *further apart* than the first pair. Also, *Laelaps nuttalli* has about six pairs of setae on the soft integument of the venter, whereas *L. stupkai* has about 11 pairs. *Laelaps stupkai* differs from other *Laelaps* species reported from the southeastern United States, as follows: *Laelaps evansi* Tipton and *L. multispinosus* Banks both have minute adanal setae and two spinelike setae on coxa I; *L. stupkai* has normal adanal setae and one spinelike seta on coxa I. *Laelaps kochi* Oudemans has spiniform dorsal setae; those of *L. stupkai* are normal. *Laelaps oryzomydis* Pratt and Lane has a spinelike proximal seta and a setiform distal seta on coxa I; *L. stupkai* has a setalike proximal seta and a spinelike distal seta on coxa I.

So far as we can determine, this is only the third report of a *Laelaps* species from *Synaptomys cooperi*. Wilson (1957) and Whitaker and Wilson (1968) previously recorded *Laelaps alaskensis* Grant from *Synaptomys* in Indiana. *Laelaps alaskensis* differs from *L. stupkai* in possessing about 16 pairs of setae on the soft integument of the venter, versus 11 pairs in *stupkai*.

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